

MANUFACTURING EXTENSION PARTNERSHIP

Success Stories from the Field

PROBES UNLIMITED INC

Delaware Valley Industrial Resource Center

Probes Unlimited, Inc. Succeeds with Lean

Client Profile:

Probes Unlimited, Inc. is a manufacturer of temperature probe assemblies and related devices for measurement of liquid, air and gases. The company produces custom-designed products for Original Equipment Manufacturers in a variety of industries including scientific and analytic instrumentation, computer chips, energy management, commercial cooking and more. Probes Unlimited operates out of Lansdale, Pennsylvania and employs 30 people.

Situation:

The U.S. temperature measurement market is highly competitive. More than 200 companies design and manufacture temperature sensors, and annual sales of the overall temperature measurement market are over \$1 billion annually. Commodity production of sensors has moved overseas, with U.S. producers like Probes Unlimited supplying the demand for specialty products, smaller runs and faster delivery times. According to Probes Unlimited owner Ernie Delaney, "Our customers want the price to go down every year, even if our raw material prices go up. We had lost a few jobs because we could not meet price or delivery requirements. We didn't want to get squeezed out of the market." After speaking with a customer who had achieved dramatic improvements through Lean manufacturing methods, Delaney contacted the Delaware Valley Industrial Resource Center (DVIRC), a NIST MEP network affiliate.

Solution:

DVIRC introduced Probes Unlimited employees to Lean through Lean 101 training. With assistance from DVIRC, Probes Unlimited has organized work areas using Lean 5S (Sort, Set in Order, Shine, Standardize, Sustain) techniques, used Value Stream Mapping (VSM) to track work processes, conducted Kaizen events to identify waste and streamline operations, and transformed manufacturing and assembly operations to more efficient cellular systems, "But, it was a tough sell at first," notes Delaney. "There was a lot of push back from employees. They thought Lean meant cutting staff." To encourage buy-in from the workers, Delaney promoted the fact that production would be more organized, and would reduce workplace stress caused by delivery expectations and production realities.

One of the first successes Probes experienced was in identifying what DVIRC called an 'inch worm' mentality. Orders were shipping piece meal, with a tremendous amount of work in process, but not a lot of actual production. By changing the process to work cells, employees immediately saw that better organization led to reduced stress, faster turnaround and greater productivity. In one Kaizen event, a job that previously took five people eight hours to complete, was reduced to just 90 minutes. Another Kaizen event on an epoxy process reduced cure times from a full night, to just two to three hours, with less wasted material.

Probes Unlimited has experienced continual success with Lean in all areas of operations, including production, assembly, inventory management and space utilization. An employee reward system was

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established that encourages continuous improvement by offering time off for time-saving work practices. Delaney noted that the work atmosphere has gone from one of high stress to one with employees working as teams and jobs progressing faster than ever. The assistance provided by DVIRC has helped Probes Unlimited move closer to being competitive with overseas producers, while offering the added advantage of fast delivery of small orders.

Results:

- * Increased output by 90 percent.
- * Reduced set up operations significantly.
- * Reduced floor space, providing room for growth.
- * Achieved a more competitive and profitable position.

Testimonial:

"Our DVIRC consultant had great expertise in both manufacturing operations and Lean techniques. The DVIRC experience was very positive. Their expertise is highly valued."

Ernest Delaney, Owner